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INTERNATIONAL COMMITMENT AND THE
LINKAGE TO THREAT: AN INDICATORS AND
MEASUREMENT APPROACH

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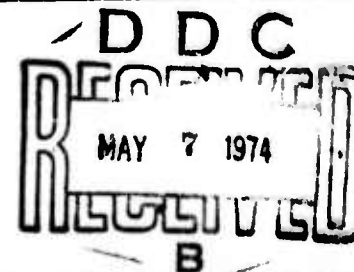
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This paper, TR&A Technical Paper No. 13 by Wayne Martin, is an attempt to operationalize the concept of international commitment, develop a preliminary model of commitment, conduct some preliminary tests of commitment data, and make the linkage between commitment behavior and situational threats. Professor Martin's paper demonstrates that quantitative measures can be established to measure the international commitments of nation-states and that by identifying these commitments the structures of future situational threats can be discerned.

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**International Commitment and the Linkage to Threat:
An Indicators and Measurement Approach**

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February, 1974**

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INTERNATIONAL COMMITMENT AND THE LINKAGE TO THREAT:
AN INDICATORS AND MEASUREMENT APPROACH

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January 29, 1974

The task of the project reviewed in this paper is to examine procedures for systematically locating and measuring degrees of commitment between nations. The report presents some basic concepts and assumptions about international commitments that are essential for developing an understanding of international commitments. We have also included a preliminary examination of a data-based methodological procedure for identifying degrees of international commitment which should be useful to the policy analyst concerned with estimating the international alignments of both allies and adversaries.

The first section of the paper introduces some of the basic considerations which commitment analysts must deal with. Some of the literature on international commitments is reviewed to throw light on the question of how one can best identify and measure the degree to which nations appear to be obligated to come to the defense of other nations. The remainder of the paper is an attempt to operationalize our understanding of international commitment. A model has been developed for identifying and measuring international commitments based upon the use of multiple commitment indicators.

The commitment model remains in an early stage of development. The intention is to develop a single, flexible, and modifiable model for measuring international commitments, operated on through a variety of different analytical techniques from simple arithmetic algorithms to complex multivariate statistical analyses and using either real world or simulated data, or both. The model is intended to be a tool for examining various possible commitment scenarios. In this paper, it is utilized to test a set of commitment indicators the international relations literature suggests are particularly important as identifiers of defense obligations.

The reader is to be cautioned that this is an exploratory study. There is not an extensive literature available on international commitment analysis and research

findings in this area are still highly tentative. The work described in this paper opens up a fascinating and important area of research. New insights may well develop for the analysis of international relations.

PROBLEM: INTER-NATION COMMITMENT AS AN IMPORTANT INTERNATIONAL RELATIONS CONCEPT

International obligations are not new concerns for foreign policy analysts. The record of alliance formation demonstrates that formal commitments have been both frequent and widespread in the modern nation-state system (Singer and Small, 1972). Hans J. Morgenthau has noted that interalliance relationships as a form of international commitment are "the historically most important manifestation of the balance of power (Morgenthau, p. 175)." Foreign policy makers have given attention to estimating and evaluating their commitment links with other nations as well as to the threats posed to them by linked groups of adversary nations. One major reason for this, as George Liska has noted, is that "alignments are always instrumental in structuring the state system, (and) sometimes in transforming it." (Liska, 1962, p. 12)

International commitments have received special attention because they have been perceived as potential aids or threats to national security. The linking of national capabilities with international commitments is recognized as one potential means for increasing the power of the associated nations or denying power to adversaries. International commitment ties have been credited with improving a nation's ability to maintain peace (deterrence). They improve the chances of victory in a war environment (defense). International commitments have been recognized also as potential entanglements in which event processes may lead national decision makers into circumstances over which they have little control.

One of the difficult problems of evaluation in considering international commitments is to distinguish between formal explicit commitments and other actions which may lead to less formal, latent or implicit commitments. There seems to be little question that the ties which bind are far more than simple formal military alliances. In the case of the United States, for example, Robert Osgood noted that such formal alliances "account for only a fraction of the commitments of the United States," and that "as its commitments have expanded and the cohesion of its alliances has diminished, the United States has felt less need for, and seen less prospect of, obtaining prior agreement from

its allies before using, or even deciding how to use, its armed forces." (Osgood, p. 4, 1968).

Osgood has suggested that alliances, military aid and assistance, basing rights, unilateral declarations of intentions, and even "official and unofficial words and actions" can all create "understandings and expectations" of commitments. Bruce Russett, in a pair of empirical analyses on the relationship between effective deterrence and types of international commitments, has suggested that political ties, large trade relations, and military assistance are important symbols of commitments--symbols that aid in making deterrent relationships between major powers and their pawns credible (Russett, 1963 and 1967).

Thomas Schelling has noted that international commitments are based upon both explicit and implicit (latent) policies and relations. Schelling offers the important insight not only that commitments between nations are more than formal agreements, but also that, in fact, they are PREDICTIONS. Relating this understanding to the United States, Schelling has observed: "We cannot have a clear policy for every contingency; there are too many contingencies and not enough hours in the day to work them all out in advance. If one had asked in October 1962 what American policy was for the contingency of a Communist Chinese effort to destroy the Indian Army, the only answer could have been a PREDICTION of what the American government WOULD decide to do in a contingency that probably had not been 'staffed out' in advance." (Schelling, 1966, p. 53). Such predictions probably relate as much to "informal" commitments as to formal military pacts.

The question of the explicitness and even the legality of certain international commitments has been of special concern to some members of the United States Congress. The Vietnam War aroused this Congressional interest but the implications of international commitments go far beyond this one concern. It is useful to review some of the insights into international commitments that congressional investigations have produced.

On June 25, 1969 the United States Senate passed the so-called "national commitments" resolution which was in part an attempt to provide an "accurate definition of the term 'national commitment'" (GLOBAL DEFENSE, 1969, pp. 79-84). An interesting feature of this document (quoted in part below) is its attempt to outline specifically what can commit one nation (the United States in this case) to another.

Resolved, that a national commitment for the purpose of this resolution means the use of the armed forces on foreign territory, or a promise to assist a foreign country, government or people by the use of the armed forces or financial resources of the United States, either immediately or upon the happening of certain events, and

That it is the sense of the Senate that a national commitment by the United States results only from affirmative action taken by the Legislative and Executive Branches of the United States Government by means of both Houses of Congress specifically providing for such commitment (GLOBAL DEFENSE, 1969, p. 79).

Definitions of commitment, such as the above, are not very operational. As John Bremer has noted in an unpublished research paper, "the Senate's definition is deficient. . . in that it fails to conceptually distinguish between a commitment as a deterrent, and commitment as a military policy." (Bremer, 1971, p. 5).

Members of the United States Senate recognized, of course, the various functions of international commitments. They also were aware that a variety of international actions can obligate nations to come to the defense of other nations. This was one concern that has spurred on their investigation of American commitments abroad. Stuart Symington, as Chairman of the Senate's Subcommittee on Security Agreements and Commitments Abroad, summarized the point in the final report of the subcommittee when he said: "It is the day-to-day implementation of policy which frequently and sometimes almost imperceptibly provides the building blocks for future commitments" (Symington, 1970, p. 1). Symington noted further: "overseas bases, the presence of elements of United States armed forces, joint planning, joint exercises, or extensive military assistance programs represent to host governments more valid assurances of United States commitment than any treaty or agreement (Symington, 1970, p. 20)."

The commitment linkage between one nation and another may be manifested in a variety of ways, one of which is certainly the formal military commitment. There are, however, other indicators of commitment. It has been suggested that the United States has international defense obligations which go beyond its signed defense pacts. Returning to the 1962 India-China-USA situation, Thomas

Schelling has provided an example of such an objective. He has noted that the American commitment to India "was not mainly a commitment TO the Indians or their government", but rather an interest in restraining Communist China generally, in promoting confidence in other Asian governments of American resolve, and in preserving the American deterrent image in Europe (Schelling, 1966, p. 53). Schelling suggests that the lack of FORMAL defense agreements should not be interpreted to mean that no commitment for military support exists between two nations who have other mutual interests and where commitments exist even if not recognized by a formal treaty. Dean Rusk in an August 25, 1966 speech echoed Schelling by saying, "No would-be aggressor should suppose that the absence of a defense treaty, Congressional declaration, or U.S. military presence grants immunity to aggression." (GLOBAL DEFENSE, 1969, p. 3)

A major assumption in our work, therefore, is that a model of international commitments must be based upon the recognition that there are many behavioral activities which raise the expectation of international commitment. These activities occur over time and set precedents and thus expectations for future activity (Payne, 1970, p. 127). Nation-states, both great and small, are linked internationally to other nations in a variety of ways and these links in large part determine, or at least raise expectations of future international behavior.

CHARACTERISTICS OF INTERNATIONAL COMMITMENT

In the sociological literature, there is the notion that a commitment is manifested as consistent behavior. Howard S. Becker, in a particularly insightful article, explored this understanding of commitment and developed a partial theory of commitment. It is directly applicable to our study. Becker avoids the simple, intuitive assumption that consistent behavior identifies a commitment, by asking, "what kind of explanation of consistent behavior lies implicit in the concept of commitment." (Becker, 1960, p. 35). Becker's answer is to specify characteristics of commitment "independent of the behavior commitment will serve to explain."

One characteristic of a commitment, independent of its behavioral manifestation, is the side-bet. When a committed party, involved directly in an action, pursues interests that originally were extraneous to the action, that party has engaged in a side-bet. If an interest is conceived of as a "stake" for remaining consistent, then inconsistency will be seen as a cost rather than a feasible alternative. Thus,

a side-bet can be an action consciously taken to increase the reliability of a commitment. Independent values are tied to the support relationship. The placing of troops in foreign areas to enhance a deterrent is an example of such a side-bet. The stationing of such troops acts as a stake to ensure action against anyone who would destroy the troops in the process of attacking an ally. As Schelling has noted with regard to the stationing of American troops in Europe, "The implicit argument was not that since we obviously would defend Europe we should demonstrate the fact by putting troops there. The reasoning was probably that, whether we wished to be or not, we could not fail to be involved if we had more troops being run over by the Soviet Army than we could afford to see defeated." (Schelling, p. 47, 1966)

Even more interesting than the deliberate tying of independent interests to a commitment are situations where side-bets are made not by conscious decision, but by the condition of membership within a particular system or organization. The underlying assumption here is that acceptance of the organizations's rules may force an actor to perform in accordance with the expectations of other members of the organization who give definition to these rules, however implicit they may be. Becker has provided some insight into such situations; we can highlight his point with some international relations references.

Situations of commitment arise when "generalized cultural expectations" constrain behavior. Here the condition is such that penalties are invoked when these expectations are violated. This is a difficult concept to work with, but foreign policy and strategic analysts will not find the conditions unfamiliar. The foreign policy literature is replete with notions of diplomatic obligation, prestige, credibility, national honor, etc. Decision-makers are sensitive to these considerations. President Nixon in his February 1970 foreign policy report to the Congress stated the following with regard to the American General Purpose Forces strategy: "Weakness on our part would be more provocative than continued U.S. strength, for it might encourage others to take dangerous risks, to resort to the illusion that military adventurism could succeed (Nixon, 1970, p. 129)." The President's statement implies more than a recognition of the value of military capabilities in international politics. It suggests that other national leaders expect the United States to guard against "military adventurism;" the failure of the U.S. to act in accord with the expectation obviously will result in a penalty, presumably to the United States. The implication of the President's statement is that the United States (as well as

other nations) acts in the international system according to some implicit rules and expectations. These are applicable particularly to commitment relations. The decision to not implement a deterrent threat in support of an ally would provide a clear example of how such expectations can affect international behavior. Y. Harkabi, exploring such a situation, has noted the following:

Consideration must be given in such a calculation to the long-range injury inflicted on a country's reputation, the loss of international prestige should the deterrer fail to stand by his undertaking, and the effects on both allies and adversaries. The deterrer's allies may turn their backs on him should his support prove unreliable. The adversary may view the deterrer's retreat from his threat as encouragement to continue his pressure through additional encroachment and acts of aggression. Adherence to an original commitment to execute a threat is not only of direct value--depending on the importance of the subject to which the threat applies--but also of indirect and SYMBOLIC value since it reflects the character of the deterrer, his future actions, and his system of government.

Thus, not only are there generalized cultural expectations, but these expectations may be associated with particular "images" of nation-states. Nations reflecting particular attributes are expected to act according to these attributes or lose "face". National decision-makers of a nation-state who extend their nation's support to other nations and create images and expectations of obligation commit their nations to system of government (Harkabi, 1966, p. 20).

One other side-bet effect appears to be applicable in international relations. This mechanism is called "impersonal bureaucratic arrangements" by Becker. It pertains in the situation where a side-bet has been as a result of a nation making a major material investment in another nation. The resulting circumstance is far different from the image and organizational expectation dependencies, but it involves, nevertheless, costs and expected losses. Once major investments are made by one nation in another, it becomes costly to lose such investments. This consideration tends to reduce the likelihood that a nation will permit readily the loss of the investment. It appears not to matter whether this investment was based on governmental or nongovernmental involvement.

A recent policy statement made by a group of South Vietnamese Senators in the form of an open letter to United States Senator Mike Mansfield suggested such a condition. The image is set forth by members of the recipient rather than the committing nation. The South Vietnamese Senators, in urging continued United States bombing in Cambodia, justified in part their plea on the consideration that to end the bombing activity might jeopardize past United States investments in Indochina. The argument is that, since a great investment has been made already, it is wrong to discontinue payment on that investment. The size of the previous investment, itself is the reason to continue. The Senators explained:

The August 15 deadline makes the Communists more hardheaded and increases their demands in Cambodia peace negotiations. It nullifies eight years of U.S. intervention in South Vietnam and makes the ultimate sacrifice of 45,000 American dead useless. The bombing cessation in Cambodia will put South Vietnam and Thailand in the peril of death (LOS ANGELES TIMES, August 12, 1973, p. 1).

The above uses of the concept of side-bet require that there be a means to identify values applicable to international politics, according to which stakes can be measured. Here, we meet a grave limitation in our study because the field of international relations has not provided accurate operational definitions of international values except for the somewhat vague use of such terms as national security, national interest, core values, mid-range values, etc. Our approach to this problem at this stage has been to accept some rather gross generalizations about international political values as they relate to commitments. These are then operationalized on an AD HOC basis.

It is our understanding of international relations that there may be many side-bet activities operating to commit nations to other nations. Which of these activities are most common in international relations is not really known. The same uncertainty applies to the degree of dependence or independence among them. Even without this information, however, we believe that a better understanding of international commitments can be gained by examining international relationships appearing to have side-bets. We have only scratched the surface of the problem. It is thought, nevertheless, that the indicators do represent

commitment activity in which "side-bet" identifications can be made.

A final question is raised before we turn to the commitment indicators. How can we best model the international commitments of any nation-state at any given period of time? While there may be a single and highly accurate indicator of international commitment, we have not yet found it in the available literature on international commitments. There has not been enough theory development to identify any such indicator. Findings available on commitment indicators lack any estimations of the amount of explanation they provide. In other words, at this stage of development any commitment modeling is exploratory.

There is available, nevertheless, enough understanding to proceed to experiments with procedures for identifying and measuring international commitments. At this stage of development, the most important considerations for a commitment model seem to be 1) the variable(s) used to indicate commitment, and 2) the approach for operationalizing the indicator(s). We have already discussed what we believe are characteristics of a useful indicator of international commitment. The actual variables to be used for such indicators are discussed in the next section. The development of an approach to operationalizing the indicators is a serious and difficult problem. It is not provided in any complete sense in this paper. What we provide are a few simple assumptions from which more sophisticated procedures may be built. From a review of the literature it seems apparent to us that international commitments can be identified and measured best through the use of multiple indicators. The reasons for this assumption are supported in the international relations literature. Both policy makers and analysts suggest that nations become committed to other nations through actions such as formal treaty defense agreements, aid, foreign basing, etc. While no one of these alone is a sure sign of strong commitment, when they occur together they may, indeed, indicate a high degree of international commitment. Stuart Symington in his final report stated clearly his committee's understanding and conclusion on the matter:

Although individually each such activity can be defended as in no way increasing the commitment, each of these acts created an atmosphere in which the United States was better prepared and more inclined to undertake military action in the country in question; and the host government was increasingly led to believe that

such actions would be taken should contingencies develop. An expectation of involvement or action was created on both sides. (Symington, 1970, p. 21)

Becker, too, noted that singular types of commitment actions taken individually may be trivial, but that "taken together, (they may) constitute for the actor a series of side-bets of such magnitude that he finds himself unwilling to lose them." (Becker, 1960, p. 38) Thus, we suggest that there are specific behavioral activities that, when taken, can commit a nation to the defense of other nations. These actions can be thought of as indicators of commitment. When they are taken together they provide a means to both identify and measure the intensity of an international commitment.

An attempt has been made to identify and measure the international commitments of seven major international actors for a single time period. The procedure is simple and unsophisticated, the supporting data are good but turn out to be not exactly what we wanted, and the single time frame permits only a static analysis. Despite the obvious liabilities, we feel that, overall, the test is a useful and promising explanation of the concept of international commitment.

COMMITMENT INDICATORS

The literature on international commitments suggests that there may be a number of behavioral indicators of international activity that have the side-bet characteristic of commitment. Most of these potential commitment indicators are not defined rigorously, however. Even the term alliance, which George Modelski has called a key international relations term, "has no accepted definition" (Modelski, 1963, p. 68). Yet, as Modelski has suggested, commitment indicators such as alliance do have attributes that can be used in building reasonable operational definitions.

In response to a national concern over American commitments abroad the United States Senate (Symington, 1970); Congressional Quarterly (GLOBAL DEFENSE, 1969); and others (Paul, 1973) have attempted to review systematically United States foreign policy and activity in order to identify types of commitment mechanisms. Research has also been conducted to identify commitment links which appear to signal best deterrence threats in support of pawn nations (Russett, 1963 and 1967). Another study has explored

procedures for measuring "alignments" as opposed to "formal commitments" (Sullivan, 1970); and an especially interesting research project has attempted to quantitatively select the "best indicators of alignment" (Teune and Synnestvedt, 1965).

Each of these studies provides valuable insights for this project. While we cannot review all of these at length, we can describe briefly some of the findings from the previous work. Roland A. Paul, who acted as a counsel to Symington's Senatorial Subcommittee investigating American commitments abroad, has published recently a list of seven types of commitment which appear to explain a large part of American foreign area commitments (Paul, 1973, pp. 8-11). These seven types are: the formal defense treaty, security agreements not ratified formally, unilateral and public policy declarations, the stationing of troops abroad, moral commitments, general mutual identifications, and accumulated policy investments. While Paul's definitions of a few of these commitment types may be difficult to operationalize, the usefulness of such a typology is clear. It provides a needed direction for selecting operational indicators of commitment, and it supports our contention that, in order to provide a comprehensive picture of the foreign commitment of any nation-state, multiple commitment indicators are called for.

Some research has been completed on selecting the "best" indicators of international commitment or alignment. It seems to us that it is too early in the study of commitment to accept all the findings that are available. Too few tests, questionable data, weak working assumptions and so forth limit the definitiveness of the research to date. Henry Teune and Sig Synnestvedt have made, nevertheless, an interesting attempt to select some alignment indicators (Teune and Synnestvedt, 1965). In their study, they collected data on the characteristics of 119 nations' economic, social, and political systems. They included, as well, data on certain international relations between the countries and the U.S. and USSR and attempted to see how these characteristics correlated with expert judgments of United States and Soviet alignments with these countries. They found that military commitments, votes in the United Nations, diplomatic recognition patterns, diplomatic visits by heads of state and others, and economic aid correlated somewhat with the judgments of the experts.

Teune and Synnestvedt conclude from their work that "an overall alignment index will enable scholars to make a more accurate assessment of the impact of a given decision on the

general alignment patterns of both a specific country and of the world." Teune and Synnestvedt do not answer completely for us the question of what factors (such as psychological penetration, economic dependence, political structure, past political experience, or confidence) best explain commitments, but their work does suggest that we can compare quantitatively the potential commitment indicators. They show clearly a number of variables that might well be useful commitment indicators.

We recognize that the selection of commitment indicators is an especially important aspect of the problem. Any findings drawn from the commitment model are dependent, obviously, on the accuracy and completeness of the indicators. We identify seven indicators that we think the literature on international commitment supports. We have intuitive confidence in these indicators; at the same time, we offer the following caveats.

First, the commitment indicators were selected on the basis of whether or not there was evidence that suggested that the condition or activity bore the attribute of a side-bet obligation. There are apparently several conditions and activities that have the characteristic of commitment. Selected were those that were mentioned often in the commitment literature and for which real world data were available. Those chosen may not be the right ones. Entirely different indicators and other available data might have been employed.

Second, we have not weighed any of our indicators. Each of the variables is considered to be of equal influence as a commitment indicator. It could be that this is wrong; but future research might include experiments with various weighting procedures. The simple procedure used in the first effort is explained in the following section.

Third, the data collected for the demonstration are not, in every case, in the form we would prefer. The cases where we were disappointed particularly are noted below. Unfortunately, the data for the variables we wanted are often classified or simply not available for all of the included nations. We do believe, nevertheless, that the available data were "good enough" to support the measures of commitment.

Fourth, we selected for the study the international commitments of the United States, United Kingdom, France West Germany, Soviet Union, Peoples Republic of China, and Japan to other legitimate nation-states for the year 1971.

Sub-national groups such as the Palestine Liberation Organization and Viet Cong, while important international targets, were not included because of some particularly difficult data problems. It is true, nevertheless, that some of the seven major nations listed above appear to have commitment links with sub-national groups. The Soviet Union and Communist China, for example, made many policy declarations of support to such groups during the period under study.

The following are the seven commitment indicators selected for the study. Further clarifications of these variables are presented below. A discussion of each indicator is included.

1. MUTUAL DEFENSE TREATY

While there may be no acceptable and general definition for international alliances, there are attributes of alliances that provide for a useful operational definition. A formally agreed upon alliance is credited generally as a particularly binding type of international obligation. It creates expectations of mutual military assistance for two or more nations standing in opposition against other nations. The distinguishing aspect of an alliance when compared with other types of cooperative international behavior is the factor of the explicit expectation of military cooperation among the signatories. Alliances make explicit the shared international political interests, and they also raise the expectation that there is a joint political/military obligation to attend to these mutual interests. (Modelski, 1963, p. 773 Osgood, 1968, p. 20 Wolfers, 1968, p. 268).

All this is illustrated in Charles Osgood's 1968 definition: "...an alliance is defined as a formal agreement that pledges states to cooperate in using their military resources against a specific state or states and usually obligates one or more of the signatories to use force, or to consider (unilaterally or in consultation with allies) the use of force, in specified circumstances." (Osgood, 1968, p. 17) An alliance is the most obvious commitment indicator extant in the international system. It identifies clearly the obligations of nations, and notes explicitly the values and interests to which the commitment is attached. For the purposes of this study alliances are limited to those formally agreed upon Multilateral and Bilateral Mutual Defense Treaties in force in 1971. In due course, other data bases should be tried. For example, relevant material have been collected in J. David Singer's Correlates of War Project. Singer's alliance data are different from those

used in this study. We would like to compare the test results given in this paper with another set of tests using Singer's data in place of our own for this indicator. We again note that the mutual defense treaty variable has not been given any special weighting factor. Work with weights should be conducted at a later time.

There are a number of ways in which one nation may militarily commit itself to another nation with or without an accompanying formal alliance. One such condition is the physical maintenance of troops of one nation on the soil of another. Military aid and assistance in the form of equipment, technical advice, or training are other examples of military commitment. Contracts made for military assistance or basing rights are in many ways similar to alliances especially in the fact that they may "contain explicit political provisions concerning the use of weapons and facilities . . . (and) are based on definite understandings and expectations (whether shared by both partners or not) about the purposes and circumstances of the specified military cooperation." (Osgood, 1968, p. 19) Nevertheless, the conditions of the foreign stationing of troops, the maintenance of foreign area bases, and military assistance, are different types of international commitments that may exist with or without an accompanying formal mutual defense alliance. It is useful, therefore, to keep distinct these different types of commitment activity.

2. FOREIGN AREA BASING AND OVERSEAS TROOP DEPLOYMENT

The maintenance of Foreign Area Bases and/or Troops may be for three basic reasons. The first is for the enhancement of local military capabilities. The second is for the enhancement of the major nation's military strength (Osgood, p. 92). The third is for the purpose of demonstrating a willingness or the necessity of a major nation to defend an ally (Schelling, 1966, p. 47). Whatever the stated intentions for maintaining foreign area bases or deploying troops in foreign areas, the action raises the expectation of a commitment. Analysts for the Stockholm International Peace Research Institute suggest that such foreign military presence "clearly indicates which third world regions are of special interest to big powers (SIPRI, 1972, p. 243)."

The American deployment of troops in both NATO and non-NATO European nations, for example, has often been cited as an obvious indication and perhaps a signal of United States willingness to defend those nations where the troops are deployed. General Earle Wheeler has suggested that "by the presence of U.S. forces in Spain, the U.S. gives Spain a far more visible and credible security guarantee than any

written document (GLOBAL DEFENSE, p. 22)." Senator Symington has offered the view that "the government of South Korea has recognized the principle of the presence of United States forces being (sic) more important than treaty language itself (Symington, 1970, p. 21)." Some Congressmen as well as strategic theorists such as Thomas Schelling have noted that the deployment of troops in foreign areas not only signals a commitment, but also reduces the likelihood of escape from the situation by the committing nation because the escape bridges have been burned. In other words, a side-bet is made for the actor as well as perhaps by the actor. Whether by inadvertency or decision, the deployment of troops overseas involves clearly and directly the nation's honor and reputation, and obligates it in the name of those troops to act if they should be put upon by an adversary. This condition is one of the major reasons why there has been so much concern over increased Soviet involvement in the Middle East and Indian Ocean areas. The apparent commitment of the Soviet Union to certain nations in these areas is based largely on its sending of troops and its gaining of basing rights in the Middle East and South Asia.

For the study, we have used the term Foreign Military Presence and its definition as given below by SIPRI. No attempt has been made to distinguish among the different definitions, histories, or justifications for foreign area basing provided by the deploying nations. Rather, we have simply recorded the number of deployed military personnel by major nations in other nations for the year 1971. In later studies, various procedures for "weighting" troop levels on bases other than simple frequency counts should be considered.

The concept of foreign military presence, as used here, refers to: (a) the actual access by a foreign power to, and the use of military facilities, usually provided by what is commonly called a military "base"; or (b) the actual presence of organized units of soldiers, sailors, marines or airmen in foreign territories, or (c) the actual deployment and permanent activities of fleets outside their own territorial waters. In this way, controversial questions, such as the formal status of military bases (whether they are under foreign or local jurisdiction, etc.), the legal basis for the presence of troops in the foreign territory, or the purposes of naval activities, are avoided. The criterion used for determining the existence of a military presence

in foreign territories is thus actual physical presence rather than formalities regulating this presence (SIPRI, 1972, p. 241).

3. MILITARY AND ECONOMIC AID AND ASSISTANCE

Military and economic aid and assistance are given for a variety of reasons as a commitment indicator. Considerations include the building up of indigenous national forces against internal and external threats, the gaining of international political support from the receiver, the affecting of internal policies within the recipient nation, and the possible denial of access to other foreign donor nations. On the other hand, it is not uncommon to find two adversaries providing military and economic aid to the same nation (Osgood, p. 93-94). For present purposes, we have combined military and economic aid into a single commitment indicator. In many policy statements given by national decision-makers both types of aid are discussed as complementary and as intended for similar policy goals. The authors of GLOBAL DEFENSE have noted, "the distinction between economic and military assistance, according to an (American) aid official, has sometimes been more apparent than real (GLOBAL DEFENSE, 1969, p. 39)."

Not only is there a relationship between how aid funds and assistance can be traded-off between defense and non-defense interests, but there is also the resulting image of a "special interest" created by a formal aid program. This image raises the expectation of mutual interests and commitment between the aid donor and the recipient. Military and economic assistance in the form of grants, loans, or credits is provided for particular political reasons as noted above. The latter become substantial indicators of commitment. Aid raises the expectation of common interests among the nations involved in the relationship, and is regarded generally as a sign of international commitment (GLOBAL DEFENSE, pp. 37-43).

Another possible effect of the provision of military and economic aid and assistance is that it may create an image of obligation to a recipient nation. The donor may feel pressure to maintain that aid and assistance for fear of losing reputation if the aid is stopped. Furthermore, such aid may create an investment which the donor will find too costly to lose. Both conditions establish side-bets for the donor nation. The donor is committed to maintain the support relationship.

A number of variables could be used as indicators of military and economic aid and assistance. The best might be the actual aid amounts transferred from donor to recipient in monetary units, or in some other quantitative form. The main problem with this is that it is difficult to collect such information for nations since much of the data either is kept secret or not published completely or systematically across nations.

The variable that is used in the current investigation measures economic aid and assistance, but in a somewhat different manner. We have collected data for the frequency of economic and military aid promises, aid grants, and aid agreements between the seven major nations and all other nations as recorded in the NEW YORK TIMES for the years 1969, 1970, and 1971. These data have been derived from the collections of the World Event Interaction Survey at the University of Southern California.

We selected aid promises, grants, and agreements from the World Event Interaction Survey (WEIS) data as highly visible signals of international commitment. Since these data were published in the NEW YORK TIMES we have assumed that they were available generally to members of the international system. They are especially public as commitment indicators. Three years of data were included because it was thought that the cumulative effect of public aid statements over three years might be a more salient indicator of commitment than that of but one year of data. The decision was arbitrary and based on intuitive grounds. We recognize that this is another area where more testing is necessary.

It cannot be claimed that the WEIS data set is the best or most complete collection of information on aid promises, grants, or agreements that could be generated. Better collections could be assembled if time, money, and influence opened now closed data resources. The point is that the WEIS data set is the best available source that we know of for the information being sought. The WEIS categories from which the data were organized are the Promise, Reward, and Agree categories (Fitzsimmons, ET AL, 1969). We read through all of the descriptive entries for the seven major nations as actors to all other nations for the three years, and selected relevant data items.

4. ARMS CONTROL

The supply of weapons from one nation to another, according to the Stockholm International Peace Research Institute, is not very different in its impact from

supplying troops. Both actions commit donor nations. SIPRI writers suggest that "the supply of weapons to one side or another should in many cases be seen as an indirect use of force in a conflict; the supplying country becomes identified with that side and vitally concerned with its success or failure." (SIPRI, 1970, pp. 13-14)

The United States Department of Defense, according to the authors of GLOBAL DEFENSE, consider military assistance and military sales to be parts of the same program. General Warren is quoted in GLOBAL DEFENSE as saying that foreign military aid and sales are "twin instruments of. . .national policy. They complement each other as means by which the United States supports, strengthens, and participates in free world collective security...The armed forces we thus support represent an extension of our own defensive posture and a major deterrent to Communist aggression (GLOBAL DEFENSE, 1969, p. 43)."

The variable we have used to measure military sales is arms sales orders as recorded by the STOCKHOLM INTERNATIONAL PEACE RESEARCH INSTITUTE YEARBOOK OF WORLD ARMAMENTS AND DISARMAMENTS 1969/70 and 1971/72, and the International Institute of Strategic Studies MILITARY BALANCE, 1971 and 1972. Again, we would have preferred to use data on the exact monetary amounts of these orders, but these data were not available in a readily usable form. The numbers of different types of major weapons systems ordered during the years 1970 and 1971 were recorded. The two years provided a fairly large number of data entries, although it should be noted that there were probably other arms orders made during this period for which specific 1970 and 1971 order dates were not available to us.

5. POLICY STATEMENTS AND ACTIONS

The fifth indicator we have included is that of unilateral declarations of intention and of military support from one nation to another. Robert Osgood has said that indirect "official and unofficial words and actions, (create) understandings and expectations that are no less significant for being implicit." Osgood argues that such "understandings and expectations are the substance of alignments of power and interest, and alliances and other explicit commitments would be useless without them (Osgood, 1968, p. 19)."

Statements made in support of other nations's policy are committal actions possibly as much as are joint military maneuvers. Both demonstrate in public similar national interests, and register widely known intentions of support.

Here, continuing support is implied because the declarations tend to bind diplomatic prestige and national honor to the commitment. As was noted above, actions that raise the general expectation of an international obligation, created purposefully or by default, constitute side-bets for the actor.

The variables selected for this indicator are (1) policy statements made by the national decision-makers of the seven major nations indicating directly an intention to support or continue to support the policy of another nation, and (2) events marking joint military maneuvers between the major nations and other system members. Data were assembled for a three year period--1969, 1970 and 1971. The three years provide a large number of total events, and yet keep the focus close to the 1971 time frame. Again, more testing should be conducted in order to determine the optimum time period for which data should be collected.

The data source is the World Event Interaction Survey - again, the best source readily available at present for the type of information we needed. The WEIS descriptive files for the categories Comment, Approve, Promise, and Agree were read; selected from these files were all policy support statements. We would add that we know a more complete set of commitment statements could be collected. In 1971 a small pilot project was initiated by John Breamer while he was a graduate student at the University of Southern California. He found the undertaking feasible, but discovered also that it would take considerable resources to do a competent job for more than a few nations.

The remaining two commitment indicators are measures of political and economic cooperation and dependency in the international system. We call them economic and political alignment indicators, although the term alignment as it is used generally would also apply to the other five commitment indicators (Modelski, 1963).

The alignment variables may not appear to the reader as very similar to our other indicators, however. In fact, they are not. The two alignment variables are more in the nature of measures of generalized coordinated international interests than of mutual policy orientations toward specific defense issues. We think they are complementary, nevertheless, to the overall commitment policies of the nations we are investigating. They should tend to reinforce the evidence of strong commitment ties and to isolate weaker commitments not based on broad and deep mutual interests.

The general alignment variables are the most difficult indicators to link with side-bets. The notion is that general alignments are situations that have developed over a period of time and that represent investments of one country in another. The loss of an alignment is deemed costly and decision-makers tend to avoid that outcome. There may be a number of indicators of general alignment. We suggest that the best indicators are those derived from monetary or other material considerations. For this reason, trade links are selected as an economic indicator of alignment. Non-military international agreements are made to stand as the political indicator of alignment.

6. ECONOMIC ALIGNMENT

The degree of economic dependence between two nations can be measured variously. International trade involves a visible type of international economic dependency. It is a traditionally useful, if somewhat gross, indicator about which reliable and easily obtained records are kept. The indicator identifies clearly and comparably degrees of mutual economic interests. Ties that have been long in the making and that bear directly on the well-being of the nation-state are involved. Bruce Russett finds in his research that trade ties help to make more credible the international deterrent effects against adversaries who are threatening pawn allies (Russett, 1963 and 1967). This suggests that large trade ties tend to commit major nations to close trading partners.

For the purpose of the study, we have used the total amount of trade (exports and imports) between each of the seven major nations and every other nation for which data were available for the year 1971 as a measure of economic alignment. Again we emphasize that the total trade variable is but one among several possible trade variables that might have been used. Total trade tends to emphasize the size factor, and we felt that this was an important consideration in the construction of this indicator.

7. POLITICAL ALIGNMENT

Political alignment, like economic alignment, is an international link that has been shown to make more credible the deterrent threats in support of pawn allies (Russett, 1963 and 1967). As in the case of economic alignment, there are a number of possible measures of political alignment. We use international agreements as the variable in the analysis, although other indicators such as international visits have also been shown to be possible measures of international political alignment (Teune and Synnestvedt,

1965).

International agreements make a good indicator of political alignment because they provide an accounting device for registering the number of times a set of nations has agreed on a particular international issue. Such agreements suggest that an investment has been made diplomatically to reach the agreement. In theory, the voiding of the agreement would entail costs. It is reasonable to assume that the greater the number of agreements reached by any set of nations, the greater the cost of negating them and, thus, the greater the commitment to protect them.

International agreements like international trade constitute a measure of mutual non-defense interests as well as commitment. International agreements occur readily, therefore, among certain so-called adversaries as well as among allies. We estimate that this attribute of the two alignment aspects should not distort the analysis. Instead, it should account for the important contemporary international phenomenon of nations, and especially major nations, being highly dependent upon one another. The multiple indicator model will tend to minimize the influence of a relationship that shows a close international association on only one or a few of the indicators. By the same token it should enhance the strong measures of broadly-based and comprehensive international commitments.

THE IDENTIFICATION AND MEASUREMENT OF INTERNATIONAL COMMITMENT

The procedure that identifies and measures international commitment is a rank order analysis. The procedure is appropriate for the type of exploratory work we are doing. The computational operation is simple and it provides a rough but useful estimate of the relative degrees of commitment between the actor and target nations. A similar method was employed in an earlier study.

Table One lists the seven committing or actor nations, the seven commitment indicators, and the 137 possible target nations used in the analysis. The nation-states are shown by name and mnemonic code. A commitment score has been calculated for every actor-target dyad, and in the appendix the raw data and the rank scores for all variables for each of the dyadic relations are provided.

The commitment rank score between an actor and a target was calculated in the following way. First, for each actor, the 137 target nations were ranked for each of the seven variables from highest to lowest association.

TABLE ONE

COMMITMENT INDICATORS, ACTOR NATIONS, AND TARGET NATIONS

COMMITMENT INDICATORS

Mutual Defense Treaty
 Policy Support Statements, Actions
 Arms Sales Orders
 International Agreements
 Economic and Military Aid
 Foreign Military Presence
 Total Trade

ACTOR NATIONS

CHN Peoples Republic of China
 FRN France
 JAP Japan
 USSR Soviet Union
 UNK United Kingdom
 USA United States
 GMW West Germany

TARGET NATIONS

AFG Afghanistan
 ALB Albania
 ALG Algeria
 AND Andorra
 ARG Argentina
 AUL Australia
 AUS Austria
 BAR Barbados
 BEL Belgium
 BOL Bolivia
 BOT Botswana
 BRA Brazil
 BUL Bulgaria
 BUR Burma
 BUI Burundi
 CAM Cambodia
 CAO Cameroun
 CAN Canada
 CEN Central African
 Republic
 CEY Ceylon
 CHA Chad
 CHL Chile

TARGET NATIONS (cont)

CHN People's Republic
 of China
 CHT Republic of China
 COL Columbia
 CON Congo (Brazzaville)
 COP Congo (Kinshasa)
 COS Costa Rica
 CUB Cuba
 CYP Cyprus
 CZE Czechoslovakia
 DAH Dahomey
 DEN Denmark
 DOM Dominican Republic
 ECU Ecuador
 ELS El Salvador
 ETH Ethiopia
 FIN Finland
 FRN France
 GAB Gabon
 GAM Gambia
 GME East Germany
 GMW West Germany
 GHA Ghana
 GRC Greece
 GUA Guatemala
 GUI Guinea
 GUY Guyana
 HAI Haiti
 HON Honduras
 HUN Hungary
 HOK Hong Kong
 ICE Iceland
 IND India
 INS Indonesia
 IRN Iran
 IRQ Iraq
 IRE Ireland
 ISR Israel
 ITA Italy
 IVO Ivory Coast
 JAM Jamaica
 JAP Japan
 JOR Jordan

TABLE ONE (cont)

TARGET NATIONS (cont)

KEN Kenya
KON North Korea
KOS South Korea
KEW Kuwait
LAO Laos
LEB Lebanon
LES Lesotho
LBR Liberia
LBY Libya
LIC Liechtenstein
LUX Luxembourg
MAC Macao
MAG Malagasy
MAW Malawi
MAL Malaysia
MAD Maldives
MLI Mali
MLT Malta
MAU Mauritania
MEX Mexico
MOC Monaco
MON Mongolia
MOR Morocco
MOM Muscat and Oman
NEP Nepal
NTH Netherlands
NEW New Zealand
NIC Nicaragua
NIR Niger
NIG Nigeria
NOR Norway
PAK Pakistan
PAN Panama
PAR Paraguay
PER Peru
PHI Philippines
POL Poland

TARGET NATIONS (cont)

POR Portugal
RHO Rhodesia
RUM Rumania
RWA Rwanda
SAN San Marino
SAU Saudi Arabia
SEN Senegal
SIE Sierra Leone
SIN Singapore
SOM Somalia
SAF South Africa
SYE South Yemen
SPN Spain
SUD Sudan
SWD Sweden
SWZ Switzerland
SYR Syria
TAZ Tanzania
TAI Thailand
TOG Togo
TRI Trinidad-Tobago
TUN Tunisia
TUR Turkey
UGA Uganda
USR Soviet Union
UAR Egypt
UNK United Kingdom
USA United St. of America
UPP Upper Volta
URU Uruguay
VEN Venezuela
VTN North Vietnam
VTA South Vietnam
WSW Western Samoa
YEM Yemen
YUG Yugoslavia
ZAM Zambia

The highest association was assigned the rank of 1, the second highest association the rank of 2, and so on. We managed observed ties with the procedure one uses when calculating a Spearman Rank Order Correlation. "When tied scores occur, each of them is assigned the average of the ranks which would have been assigned had no ties occurred...(Siegel, 1956, p. 206)." There were a very large number of tied scores, and the effect of such ties has been to create lower ranks, overall, for commitment links. In future tests a correction factor for this condition may be used.

The second step in the procedure was to sum the rank scores for the seven variables for each target nation for a total rank score, and divide this total by seven for an average final commitment score. The average final commitment scores are those shown in the following tables. The average rather than total rank score was used for display because the average score is somewhat easier to interpret.

The strongest commitment score possible with our measurement technique was one, in which case a target nation would have to score the highest rank for all seven variables with one of the committing nations. We found no such actual relationship in the data. The low end of the range for these scores varied by actor because of the uncontrolled condition of tied scores. A brief summary of the results of the analysis is found below. We list in tables the most committed target nations for the actors, a brief summary of all of the final commitment scores, and the range of the final scores for each actor. In the appendix, the raw data for the commitment scores for all dyads are shown.

The procedure described assumes that each commitment variable contributes equally to the final commitment score. While the decision to consider each commitment variable of similar value to every other variable was arbitrary, there is good justification for such a procedure in this early test of the model. The seven variables used in the analysis were intercorrelated and factor analyzed to determine the degree of independence among the commitment indicators. The results shown below in Table Two suggest that the commitment indicators are not very associated, and can be considered as independent variables. The correlation and factor analysis results increased our confidence that we were not measuring redundantly similar commitment indicators. These results did not affect, of course, our decision not to weight the variables. That decision was based on an interest to keep this test as conservative as possible. Future testing of

the model may include various weighting trials based on technical procedures such as the use of factor scores. The procedure described provided us with a crude but useful measure of relative commitment.

United States Commitments: The commitment scores for the United States are given in Table Three. The results show what would be expected ordinarily. Included in the top 15 most committed nations are those traditionally or commonly recognized by most people as strong U.S. allies. Seven NATO allies, Spain, Japan, South Korea, Nationalist China, South Vietnam, Thailand, and the Philippines are among these nations. The only nation appearing as a possible surprise--because it is so high on the list--is Australia.

The next 20 nations again are what might be expected. Five more are NATO nations and 13 are members of the OAS. Of special interest is Israel which has a high score of 36, indicating a strong United States commitment. Pakistan also ranks high on this list.

We used, generally, the average total rank score of 50 as an arbitrary cutoff level for the tables. The preliminary work suggests this to be a useful but tentative separation level between commitment and non-commitment, but this is also a question for further research. The 35 nations with rank scores above 50 shown in Table Three account for 26% of the target nations, and their scores range from 14 to 49. We have no means for measuring the significance of these scores except through inductive reasoning and the comparison of scores for all other actor-target dyads. As we will come to see, however, the results do suggest that the United States has a large number of widely spread-out commitments when compared to our other actors.

TABLE TWO

Pearson Product Moment Correlation Matrix
For The Seven Commitment Indicators*

	TREATY	POLICY	ARMSALES	AGREE	AID	MILPRES	TRADE
TREATY	1.0000	0.3360	0.1519	0.2016	0.1828	0.2357	0.3654
POLICY	0.3360	1.0000	0.3147	0.1663	0.5468	0.3882	0.2108
ARMSALES	0.1519	0.3147	1.0000	0.0985	0.3149	0.0680	0.1927
AGREE	0.2016	0.1663	0.0985	1.0000	0.1032	0.1130	0.3357
AID	0.1828	0.5468	0.3149	0.1032	1.0000	0.2517	0.0274
MILPRES	0.2357	0.3882	0.0680	0.1130	0.2517	1.0000	0.2132
TRADE	0.3654	0.2108	0.1927	0.3357	0.0174	0.2132	1.0000

Varimax Rotated Factor Matrix*

	FACTOR 1	FACTOR 2	FACTOR 3	FACTOR 4	FACTOR 5	FACTOR 6	FACTOR 7
TREATY	0.0982	0.0563	0.9639	0.0684	0.0839	0.1700	0.1323
POLICY	0.1924	0.1477	0.1548	0.2817	0.0677	0.0848	0.9089
ARMSALES	0.0102	0.9766	0.0545	0.1399	0.0350	0.0860	0.1222
AGREE	0.0394	0.0346	0.0799	0.0392	0.9809	0.1554	0.0557
AID	0.1095	0.1514	0.0691	0.9469	0.0417	-0.0241	0.2478
MILPRES	0.9718	0.0098	0.0600	0.1037	0.0403	0.0915	0.1598
TRADE	0.0946	0.0902	0.1721	-0.0216	0.1661	0.9591	0.0728

*The correlational and factor analysis were for all dyadic cases for which data were available. All cases where there were seven row zeros were not included in the analysis. There was a total of 793 cases. Correlational and factor analyses were also run for each of the major nations independently of the others. The results from these sub-file tests do not alter significantly the result described above.

TABLE THREE
UNITED STATES COMMITMENTS

TOP 35 TARGETS (26%)

NATION	RANK SCORE	NATION	RANK SCORE		
TUR	14	PAN	39		
JAP	16	ARG	40		
KOS	17	BEL	41		
AUL	19	DEN	42	OTHER RANK SCORES	
GMW	20	HON	42	50-59=11	(8%)
SPN	21	PAK	42	60-69=6	(4%)
POR	23	VEN	42	70-79=17	(12%)
VTS	24	CHL	43	80-89=31	(23%)
CAN	24	TRI	43	90-96=37	(27%)
UNK	24	FRN	44		
ITA	28	MEX	45		
CHT	28	DOM	46		
TAI	29	ECU	46		
GRC	32	ICE	46		
PHI	34	HAI	47		
NTH	36	COL	48		
ISR	36	NIC	49		
PER	37				

The analysis procedure appears to do a fairly competent job of separating strong from weak commitments. Sixty-six percent of the scores are in the 60-96 point range. This suggests that a large number of nations do not have a very close alignment with the United States in terms of any obligation or commitment from the United States to defend these nations. When we look over carefully the nations included in this group, we find few "disappointments." Remembering that higher numbers suggest lower relative commitment, we see that Cambodia has a ranked score of 60.6 which places it rather low relative to other United States commitments. This low rank score may not be appropriate for 1973, but seems correct for the 1970-71 period. Ethiopia's score is 78.1 suggesting either that we are off here or that Congressional worry over United States' involvement with Ethiopia may be unwarranted. The score for Spain (21), on the other hand, shows clearly that Congressional concern has been on the mark. The Arab nations score generally very low--UAR (87), SYR (90.3), SAU (73.4), LBY (85.6), LEB (70.6), JOR (58.3), while Israel (37) scores relatively high. This finding tends to support the intuitive judgments about the direction of United States commitments in the Middle East.

The scores for so-called United States adversaries are low. The Soviet Union's score is 72. North Vietnam's 87.6, Communist China's is 80, and North Korea's is 96. As was noted earlier, the multiple indicator rank model tends to emphasize broadly based international commitments and isolates relations based on only one or a few close international associations. More time could be spent on the discussion of the scores for the United States. It may be more beneficial for the reader if we review some other results. After that, the findings from all of the analyses will be summarized.

United Kingdom: Over all, the commitment scores for the United Kingdom are lower than those for the United States. This suggests fewer and more distant commitments when compared with the USA. Fourteen percent of the UNK's commitment scores are in the range of 16-50. Here we find 12 NATO members, and five ex-British colonial areas. There are no surprises in the group. British high commitment relations, like those of the USA, are located in several geographic areas. The primary locations are Europe, North America, and Oceania-South Asia.

Seventy-six percent of the United Kingdom's scores are in the 60-86.5 range. The Soviet Union (60.2), China (65.3), North Korea (85.1), South Korea (77.7), North Vietnam (86.5) and South Vietnam (83.3) fall within this area. The Arab nations also have low scores (UAR, 67.1; SYR, 80.9; SAU, 62.7; LBY, 71.4; LEB, 77.4; JOR, 70.5) as does ISR (72.1). The data suggest that JAP (70.3) and SPN (70.6) are not linked with the UNK as they are with the USA.

TABLE FOUR
UNITED KINGDOM COMMITMENTS

TOP 19 TARGETS (14%)

NATION	RANK SCORE
GMW	16
USA	29
NOR	31
MAL	33
FRN	38
NTH	38
BEL	39
ITA	39
AUL	40
HOK	40
DEN	41
POR	43
TUR	46
SAF	48
CAN	50*
ICE	50
IND	50

OTHER RANK SCORES

51-59=14 (10%)

60-69=21 (15%)

70-79=41 (30%)

80-86.5=42 (31%)

*CAN, ICE, and IND are included in this Table for reference. Their scores of 50 are just beyond the arbitrary selected cut off level.

West Germany commitments: Only nine percent of West Germany's commitments have scores of 50 or higher. All of these include NATO members, and all are, therefore, European nations except for the United States and Canada. Eighty-five percent of West Germany's scores are in the 60-84 range. All of this indicates that West Germany has only a few major commitments, and that these are in Europe and North America. Even though GMW is an important economic member of the international system, it does not appear as an international actor with many defense obligations. This is not a surprise, but it does raise some questions about notions of balance of power in the multi-polar international politics of the contemporary international system.

It should also be noted that GMW's score with Israel was 60.4, and the scores were again even lower for Arab nations (UAR, 71.8; SYR, 75.4; SAU, 68.8; LBY, 67.6; LEB, 73.6; JOR, 79.4).

TABLE FIVE
WEST GERMANY COMMITMENTS

TOP 12 TARGETS (9%)

NATION	RANK SCORE
NTH	25
UNK	25
FRN	34
USA	35
ITA	35
TUR	39
BEL	46
DEN	46
CAN	47
NOR	47
GRC	48
POR	49

OTHER RANK SCORES

50-59= 8	(6%)
60-69=26	(19%)
70-79=62	(45%)
80-84=29	(21%)

France Commitments: France, like West Germany, had relatively few high commitment links. The data show that GMW was France's only very close commitment tie. The other relatively high commitment links included in Table Six are to a geographically varied set of nation-states. This condition reflects France's recent colonial past, and its Atlantic and South Asian alliance ties. The analysis did not show France to be committed strongly to ISR (61.8) or the Arab states (UAR, 72.7; SYR, 76.1; SAU, 67.7; LBY, 55.9; LEB, 52.9; JOR, 80.5). According to the analysis, none of the three major Western European nations appear to have as many or as strong international commitments as does the United States.

TABLE SIX
FRANCE COMMITMENTS

TOP 12 TARGETS (9%)

NATION	RANK SCORE	OTHER RANK SCORES
GMW	17	50-59=18 (13%)
GAB	33	60-69=35 (26%)
UNK	38	70-79=42 (31%)
IVO	39	80-83.9=30 (22%)*
NIG	40	
CAO	43	
PAK	43	
ALG	46	
CHA	46	
USA	46	
BEL	47	
TOG	47	

*Total percentage scores over 100% are due to rounding error

Japan: The analysis indicates that Japan had only one strong international commitment, and this was to the United States (21). The other 136 Japanese commitment scores were above the value of 50. The results suggest strongly that Japan in 1971 continued to refrain from active political/military participation in the international system.

Soviet Union: The analysis shows that the Soviet Union has somewhat more and stronger international commitments than the Western European nations and Japan. The UAR, Czechoslovakia, and North Vietnam had especially close ties in 1971. So, too, did East Germany. Soviet commitments appearing in Table Seven have a wide geographical distribution. The Indian commitment probably became especially strong in 1971, and the Cuban tie appears to have remained strong over the years. The results show clearly a Soviet commitment linkage to the Middle East, Eastern Europe, and Mongolia. The score for the USSR's association with the USA is low (57.5). It is especially low for ISR (82.9), VTS (82.9), and Nationalist China (82.9). The score for the People's Republic of China is also low (58.8).

TABLE SEVEN

SOVIET UNION COMMITMENTS

TOP 16 TARGETS (12%)

NATION	RANK SCORE
UAR	14
CZE	16
VTN	18
GME	25
CUB	29
IND	29
SYR	31
FIN	31
POL	38
HUN	39
MON	41
ALG	42
LEB	45
RUM	47
BUL	49
JOR	49

OTHER RANK SCORES
 50-59=19 (14%)
 60-69=17 (12%)
 70-79=39 (28%)
 80-82.9=46 (34%)

People's Republic of China: The analysis suggests that China had few strong international commitments in 1971. China's strongest commitment was to North Vietnam. North Korea and Pakistan also had relatively strong commitments. It is interesting that 62 percent of China's scores were in the lowest range (70-75.3). This seems to be a result primarily of the fact that China was a more isolated nation in 1971 than at the present time. Poor data availability and data reporting differences may also account for this result.

The scores for the USA (58) and the Soviet Union were low (52.3). South Vietnam's score was very low (75.3). Table Seven shows that China's recent foreign policy activity in Eastern and North Eastern Africa has led to commitment ties to TAZ, ZAM, SUD, and the UAR. China's commitment scores for IND (75.3) and ISR (75.3) were very low.

TABLE EIGHT

PEOPLE'S REPUBLIC OF CHINA COMMITMENTS

TOP EIGHT TARGETS (6%)

NATION	RANK SCORE	OTHER RANK SCORES
VTN	13	50-59 =15 (11%)
KON	34	60-69 =29 (21%)
PAK	35	70-75.3=85 (62%)
RUM	45	
TAZ	45	
ZAM	46	
SUD	47	
UAR	47	

From these results we suggest the following general findings:

*First, the analysis identifies the United States as having the greatest number of high commitment relations of the seven actor nations. These commitments were directed toward European, Asian, and Latin American nations, and Israel. The United States did not appear to have strong commitment ties to Arab or African nations in 1971. The

United States did have formal defense treaties with most but not all of its high commitment targets. Spain and Israel did not have formal defense treaties with the United States.

*Second, France and the United Kingdom had a number of widely dispersed international commitments. These commitments reflect both multi-national alliance memberships and post-independence colonial ties. Of particular interest is the apparent fact that close commitment ties existed for only a few French and British ex-colonial nations. The commitment scores suggest that, overall, the commitment ties of both the United Kingdom and France were not as deep as United States' commitments.

*Third, the commitment ties of West Germany and Japan were quite distinct from those of the USA, France, and the United Kingdom. West Germany's strong commitment ties were directed only toward Western European nations and the United States. Japan had only one apparent strong commitment link and that was to the USA. These results suggest that while both Japan and West Germany are major international economic actors, they are not deeply committed to defend other members of the international system. Japan appeared to lack even regional commitments, although this condition could change with time.

*Fourth, the Soviet Union and the People's Republic of China both had commitments to other nation-states. The Soviet Union had commitments in Europe, the Middle East, South Asia, South East Asia, the Far East, and Latin America. China had commitments in the Far East, South Asia, South East Asia, and Africa. Soviet commitments in 1971 seemed overall to be deeper and more extended than China's. Both the Soviet Union and China had strong ties to North Vietnam.

*Fifth, there are a few interesting comparisons which we can make from our results. It seems clear that there were several East-West confrontation locations in 1971. One existed in South East Asia where the United States was committed to South Vietnam (14), and the Soviet Union (18) and China(13) were committed to North Vietnam. Another East-West confrontation appears to have existed potentially in the Far East where the USA was committed to South Korea (17), and China was committed to North Korea (34). The Middle East was a third area where an East-West confrontation potentiality appeared to exist. Here the USA was committed to Israel (36), and the Soviet Union was committed to the UAR (14), SYR (31), LEB (45) and JOR (49).

Other comparisons include the findings that the USA, UNK, FRN, and GMW appeared to be committed mutually to each other as were the USA and Japan. The Soviet Union and China did not have apparent, strong, and mutual commitments-a hardly surprising conclusion.

CONCLUSION

The findings from this study indicate that quantitative procedures are appropriate for identifying and measuring relative degrees of international commitment. The examination of the multiple indicator rank order model has produced results which we believe are both informative and useful. We are satisfied that the rank procedure, selected indicators, and data were adequate enough to provide estimates of the international commitments of our seven actor nations.

The analysis located commitments that both were and were not supported by formal defense treaties. Nation dyads which we intuitively suspected as having a strong commitment relationship were shown to be such. Highly unlikely commitment relationships did not surface in the analysis. All of this suggests to us that the commitment estimates were generally correct. Calculated results conformed generally with informed insights.

Our optimism is not meant to imply that we believe that a highly reliable model for identifying international commitments has been developed fully. The work was exploratory, and there is more to be done. Different indicators should be tried and better data for the indicators should be found or made. We would like to explore the use of simulated data. Interesting commitment scenarios could be generated through the use of selectively weighted and simulated data. Further testing with multivariate statistical analyses could also be conducted.

It would be useful to investigate and measure commitments between nation-states and subnational units. As noted above, the Soviet Union and China both were recorded as making a number of policy support statements to subnational groups during the years we studied. The commitment model should also be examined with smaller nations as the actors to determine whether or not the indicators can identify small nation commitments as well as major nation commitments.

Commitment models based on non-rank order procedures should be exploited. The results obtained from the data reduction from ranking do not give cause for

dissatisfaction, but alternatives should not be neglected. Although, we should note, again, our satisfaction with the method tested in this study.

Finally, it is clear that the analysis was static, and it only provides information relative to the international commitments extant in the year 1971. Efforts should now be made based on these findings and the tested model to determine how international commitments can be monitored on a regular and current basis.

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